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IS : 8078 - 1976

*Indian Standard*  
SPECIFICATION FOR  
TABLE, OPERATION, PAEDIATRIC

UDC 684.442 : 615.478.62 : 616-053.2



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**INDIAN STANDARDS INSTITUTION**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

Price Rs 5-00

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August 1976

# *Indian Standard*

## SPECIFICATION FOR TABLE, OPERATION, PAEDIATRIC

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# *Indian Standard*

## SPECIFICATION FOR TABLE, OPERATION, PAEDIATRIC

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 28 May 1976, after the draft finalized by the Hospital Equipment Sectional Committee had been approved by the Consumer Products and Medical Instruments Division Council.

**0.2** The formulation of Indian Standards on hospital equipment has been taken up at the instance of the Advisory Committee for the Development of Surgical Instruments, Equipment and Appliances, Government of India.

**0.3** This standard is one of a series of Indian Standards on hospital equipment. Other standards published so far in the series are given on pages 9-10.

**0.4** This standard contains clauses **5.2**, **6.6** and **8.2** which call for agreement between the purchaser and the supplier and which permits the purchaser to use his option for selection to suit his requirements.

**0.5** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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### 1. SCOPE

**1.1** This standard specifies constructional and performance requirements of manually-controlled, hydraulic, paediatric, operation table.

### 2. NOMENCLATURE

**2.1** For the purpose of this standard, the nomenclature as given in Fig. 1 shall apply.

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\*Rules for rounding off numerical values (*revised*).

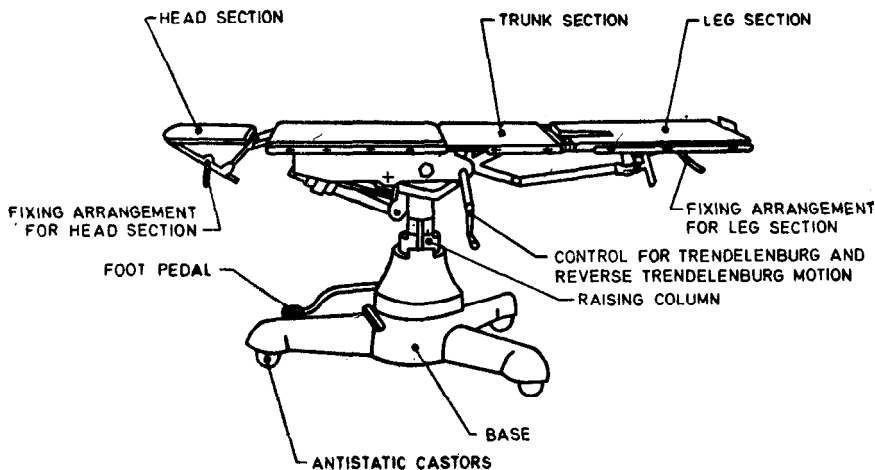


FIG. 1 TABLE, OPERATION, PAEDIATRIC

### 3. MATERIALS

3.1 The materials used in the manufacture of the operation table shall be either corrosion resistant or shall have a protective finish.

3.2 The raising column and the gearing system shall be made from materials which resist wear during normal manipulation.

3.3 The handles provided shall be made of well seasoned wood free from defects or abonite or plastics ( see Grade 1 or 2 of IS : 1300-1966\* ).

3.4 Stainless steel, where used, shall conform to Designation 04Cr18Ni11 or 07Cr18Ni9 of IS : 1570 ( Part V )-1972†.

3.5 Antistatic rubber tread castors conforming to IS : 4034-1968‡ shall be used.

NOTE — When antistatic rubber tread is not available, the construction of the table shall otherwise ensure transmission of static charge to the earth.

### 4. DIMENSIONS

4.1 **Table Top** — The minimum overall length of the table top shall be 1 500 mm. The overall width of the table top shall be 300 to 350 mm. The minimum length of head section and the leg section when drawn in shall be 220 and 400 mm respectively.

\*Specification for phenolic moulding materials ( *second revision* ).

†Schedules for wrought steels: Part V Stainless and heat resisting steels ( *first revision* ).

‡Specification for castors for hospital equipment.



**4.2 Height** — In the lowest position (without mattress), the table top shall have a height of  $750 \pm 50$  mm, and at the extreme lifted position (without mattress)  $1\ 050 \pm 50$  mm.

## 5. CONSTRUCTION

**5.1 Base** — The base shall be solid. It shall be mounted on castors so situated as not to render the operation table unstable. The base may have foot rails for providing comfortable foot rest for the surgical team. It shall be fitted with a foot pedal to raise and lower the table top.

**5.2 Table Top** — The table top shall have a minimum of four sections, namely, head, trunk (two sections) and leg section. The head section shall be detachable. As for leg section, it is left to the manufacturer to make it detachable also, if so required by the purchaser. The entire table top shall have a smooth vertical movement. It shall also satisfy the following requirements:

- a) The entire table top shall be capable of being tilted to  $45 \pm 3^\circ$  trendelenburg and reverse trendelenburg positions.
- b) It shall have arrangements for a lateral tilt of  $20 \pm 2^\circ$  in either direction.
- c) The table top may be provided with a perineal cut-out for drainage tray.
- d) Where kidney position is not capable of being obtained by various sections of the table top, a separate kidney elevator shall be provided, which shall be capable of being raised to 150 mm from the table top and shall have a head-end control for manipulation.
- e) When so desired by the purchaser, the entire table top shall have a sweep of  $360^\circ$  in the horizontal plane.
- f) The upper half of trunk section with the head section shall be capable of being raised to  $90^\circ$  and lowered to  $30^\circ$ .

**5.2.1 Head and Leg Sections** — The head section shall be capable of being raised to  $40$  to  $45^\circ$  and in its reverse position  $90^\circ$  from the trunk portion. The leg section shall be capable of being lowered to at least  $90^\circ$  from the trunk so as to enable the table to be used as a chair and also for obtaining other positions.

**5.3 Hydraulic Lifting Mechanism** — The table shall have a hydraulic pump encased in the base for controlling the lift of the table. It shall be operated by a pedal. The table lift shall be between 200 and 300 mm. All controls shall have easy access and various parts of the controls and the table shall be easy to clean and maintain. All parts intended to be removed by the user shall be easy to replace with parts of the same make and difficult to assemble incorrectly.

## **6. WORKMANSHIP AND FINISH**

**6.1** The various components shall be made accurately to give smooth operation and other performance requirements laid down in 7.

**6.2** All surfaces shall be well-finished and shall not have surface defects, such as pin-holes, blisters, blow-holes and similar other defects. All edges except those of the table top shall be rounded off.

**6.3** All the four sections comprising the table top, in their normal position, shall be in one plane approximately, when tested with a spirit level. The sweeps of the head and leg sections shall be true.

**6.4** All welded joints shall have welds fully penetrating and shall be well-finished.

**6.5** All non-corrodible metal surfaces ( aluminium and stainless steel ) shall be matt-finished.

**6.6** Corrosive surfaces like steel casting for base, cylinder castings and foot pedal shall be painted to shades which reflect the least, say, sea green or any other shade as agreed to between the manufacturer and the purchaser.

**6.7** Prior to painting, the surface shall be degreased, rust-proofed by phosphating and then suitably protected by an anti-corrosive primer, either by brushing or spraying and then finished by spraying in stove enamel or air-drying enamel of the specified shade. In every instance, each coat shall be separately stoved or air-dried as the case may be. The resulting finish shall be hard and shall not readily chip or flake off.

**6.8** In case of mild steel and brass parts, plated chromium over nickel, the coatings shall conform to Service Grade No. 2 of IS : 1068-1968\* and IS : 4827-1968† respectively.

**6.9** The handles and knobs shall have an easy grip and shall not impart colour or stain to the hand. Wooden handles, if provided, shall be coated with linseed oil or varnished. The handles shall be of detachable type or folding type.

## **7. PERFORMANCE REQUIREMENTS**

**7.1** The table shall be stable on castors and compensating floor locks if provided.

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\*Specification for electroplated coatings of nickel and chromium on iron and steel ( *first revision* ).

†Specification for electroplated coatings of nickel and chromium on copper and copper alloys.

**7.2** The table shall be capable of moving on castors on a smooth cemented floor, from its static position when a pull, not exceeding 100 N ( 10 kgf approx ), is applied to it and capable of propulsion with a pull, not exceeding 50 N ( 5 kgf approx ) after it is set in motion.

**7.3** The floor locks shall give rigidity to the table and it shall not move when a force of 500 N ( 50 kgf approx ) is applied to the base in any direction.

**7.4** When a force of 500 N ( 50 kgf approx ) is applied vertically on the extreme edge of the head section, which is horizontal with the table top, the leg section shall not lift by more than 10 mm.

**7.5** When a mass of 5 kg is dropped from a height of 150 mm on to the extreme end of the head section or centre section which is horizontal with table top, the table top shall not get damaged.

**7.6** When the accessories are clamped, there shall be no wobble under normal working conditions.

**7.7 Hydraulic Lifting Mechanism** — The hydraulic lifting mechanism shall give a vertical smooth movement to the system. When the hydraulic pressure is released, the table top shall take not less than 15 seconds and not more than 45 seconds to travel from the maximum height to the lowest position. The downward movement shall be smooth. When the table top is held in any position by hydraulic action alone, and a mass of 100 kg is put on its centre section, it shall not sink by more than 3 mm in a period of 4 hours. The performance of the hydraulic lifting mechanism shall remain unimpaired with the table top with a mass of 100 kg kept on centre section is moved up and down 20 times.

## 8. ACCESSORIES

**8.1** The table shall be provided with the following standard accessories:

- a) Foot extension,
- b) Shoulder supports — side supports,
- c) Antistatic rubber pads,
- d) 25 to 50 mm thick antistatic foam rubber mattress having electrical resistance between  $10^4$  and  $10^6$  ohms.

NOTE — When antistatic rubber is not used, the construction of the table shall, otherwise, ensure transmission of static charge to the earth.

**8.2** The following shall be optional:

- a) Neck elevator or shoulder bridge,
- b) Permeable table top for radiography with cassette tray and necessary guide,

- c) Lateral cassette holder,
- d) Stainless steel transurethral tray with wire mesh screen,
- e) Instruments tray,
- f) Neuro-surgical attachment, and
- g) Supports for pull-through operation.

## **9. INSTRUCTIONS FOR USE AND MAINTENANCE**

**9.1** The table shall be accompanied by instructions manual giving the following information:

- a) Brief instructions for installation and maintenance ( including spare parts ),
- b) Instructions for correct operation of the table, and
- c) Lift of the hydraulic lifting mechanism.

## **10. MARKING**

**10.1** Each table shall have a name-plate fixed to it showing the following information:

- a) Manufacturer's name, initials or recognized trade-mark;
- b) Any special instructions for safe handling of the table; and
- c) Country of origin.

**10.1.1** Each table may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution ( Certification Marks ) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

## **11. PACKING**

**11.1** Each operation table shall be packed in well-cushioned sturdy case to stand rough handling during transit. The case shall be of waterproof inside. The hydraulic oil shall be supplied in sealed tins and hydraulic system and gear system encased in suitable dust-proof material.

# INDIAN STANDARDS

## ON

### HOSPITAL EQUIPMENT

IS:

- 3118-1965 Electric bacteriological incubators
- 3119-1965 Hot air sterilizers
- 3120-1965 Baby incubators
- 3829-1966 Horizontal-cylindrical and horizontal-rectangular steam sterilizers, pressure type ( for hospital use )
- 3830-1970 Water stills for pyrogen-free distilled water ( *first revision* )
- 3831-1973 Sterilizer shallow ( dressing drums ) ( *first revision* )
- 4033-1968 General requirements for hospital furniture
- 4034-1968 Castors for hospital equipment
- 4035-1967 Trolleys, stretcher
- 4036-1967 Trolleys, patient
- 4037-1967 Stretchers and stretcher carriers
- 4266-1967 Lockers, bedside, for hospital use
- 4267-1967 Stands, wash hand basin
- 4455-1967 Trolleys, soiled linen
- 4458-1967 Screens, bedside
- 4494-1968 Tables, overbed
- 4510-1968 Horizontal cylindrical high speed steam sterilizers, pressure type
- 4769-1968 Trolley, dressing
- 4787-1968 Table, examination
- 5022-1968 Sterilizer, instruments ( table model ) ( *first revision* )
- 5029-1969 Bedsteads, hospital, general purposes
- 5035-1969 Sterilizers, bowl and utensil ( pedal type )
- 5291-1969 Tables, operation, hydraulic, major
- 5335-1969 Tables, bedside
- 5336-1969 Back rest
- 5337-1969 Cot, dropside, baby, hospital
- 5630-1970 Cribs ( or cradles ), maternity
- 5631-1970 Trolley, instrument, plain and curved
- 5880-1970 Stand, saline-cum-irrigator
- 6083-1971 Table, obstetric, labour
- 6106-1971 Tables, operation, hydraulic, minor
- 6328-1971 Table, operation, general purposes ( non-hydraulic )
- 6593-1972 Electric serological water-baths
- 6877-1973 Cabinet, instruments
- 6904-1973 Receptacle, waste
- 6905-1973 Instruments table, Mayo's type
- 7036-1973 Table, postmortem

- 7081-1973 Stool, revolving, for hospital use
- 7083-1973 Trolley, medicine
- 7091-1973 Lifter, bed, adjustable
- 7099-1973 Trolley, dressing drum
- 7378-1974 Bed, Fowler's, hospital
- 7455-1974 Sterilizer, pressure, hot and cold water
- 7596-1974 Table, operation, orthopaedic, Albee's type
- 8078-1976 Table, operation, paediatric
- 8079-1976 Table, operation, urological